

TABLE 15.1-3
Designated Stream Reaches in the North Fork Koktuli Watershed

Reach Name	Location (RK)	Description
NFK-A	0.0 – 13.7	Unconfined reach upstream of the confluence with the SFK
NFK-B	13.7 – 21.1	Confined, single-threaded channel
NFK-C	21.1 – 36.6	Multiple mainstem and off-channel habitats
NFK-D	36.6 – 48.4	Single-threaded channel, downstream of Tributary 1.280
NFK-E	48.4 – 52.5	Low gradient reach, downstream of canyon
NFK-F	52.5 – 57.7	Headwater confined canyon reach

NFK = North Fork Koktuli River

RK = River Kilometer

SFK = South Fork Koktuli River

Source: EBD Appendix 15.1F *Fluvial Geomorphology Studies*.

TABLE 15.1-4
Range of Summer (June, July, and August) Water Temperatures in the North Fork Koktuli Watershed

Station	Water Temperature (°C)				
	2004	2005	2006	2007	2008
NFK9WT	—	—	—	—	4.7-11.8 ^a
NFK8WT	—	—	—	—	1.9-17.7
NK100C	7.8-21.8 ^a	6.5-21.9 ^b	4.2-21.7	6.0-20.5	—
NK119A	5.3-16.8 ^a	3.4-19.6	0.9-15.1	1.9-15.4	—
NK119WT	—	—	—	—	0.3-15.4
NK100B	—	—	—	4.5-19.0	—
NFK4WT	—	—	—	—	5.1-14.3 ^a
NK100A1	—	—	—	3.6-21.9	—
NK100A	—	5.5-18.6	—	4.5-18.5	2.5-15.0
NFK1WT	—	—	—	—	6.4-12.7 ^a

Notes:

a. Data available for August only

b. Data available for June and July only

°C = degrees Celsius

— = Not available.

Source: EBD Appendix 15.1E *Open River Water Temperature Model*.

TABLE 15.1-2

Watershed Areas of the North Fork Kaktuli River, South Fork Kaktuli River, Upper Talarik Creek, and Kaktuli River within the Mine Study Area as Compared to Major River Systems in the Bristol Bay Drainage

River	Total Watershed Area (square miles)	Percent of Major River System	Percent of Bristol Bay Drainage. ^a
NFK ^b	113	0.9	0.3
SFK ^b	107	0.8	0.3
KR ^{b, c}	218	1.7	0.6
Nushagak River	12,735	100	32.5
UT ^d	135	1.7	0.3
Kvichak River	8,017	100	20.1

Notes:

- a. Total Bristol Bay Drainage is estimated at 39,184 square miles.
- b. Within the Nushagak River System.
- c. Watershed area for KR includes the portion of watershed within the mine study area, excluding the NFK and SFK watersheds.
- d. Within the Kvichak River System.

KR = Kaktuli River mainstem

NFK = North Fork Kaktuli River

SFK = South Fork Kaktuli River

UT = Upper Talarik Creek Sources:

EBD Chapter 7, Section 7.2 *Surface Water Hydrology*

Buell and Magee Bristol Bay Drainage Map (2007)

TABLE 15.1-20
Designated Stream Reaches in the South Fork Koktuli Watershed

Reach Name	Location (RK)	Description
SFK-A	0.0 – 24.9	Upstream of the confluence with the NFK
SFK-B	24.9 – 34.3	Unconfined reach
SFK-C	34.3 – 51.7	Intermittent stream, with portion cutting through lacustrine deposit
SFK-D	51.7 – 54.7	Confined reach downstream of Frying Pan Lake
SFK-E	54.7 – 64.2	Frying Pan Lake and upstream of Frying Pan Lake

NFK = North Fork Koktuli River

RK = River Kilometer

SFK = South Fork Koktuli River

Source: EBD Appendix 15.1F *Fluvial Geomorphology Studies*.

TABLE 15.1-21
Range of Summer (June, July, and August) Water Temperatures in the South Fork Koktuli Watershed

Station	Water Temperatures (°C)				
	2004	2005	2006	2007	2008
SK100G	8-19.7 ^a	6.9-20.7	4.4-20.0	5.6-18.7	—
SK100F	7.7-24.4 ^a	6.5-22.8	4.7-19.5	5.4-23.3	—
SFK6WT	—	—	—	—	8.3-16.8 ^a
SK100C	—	6.9-19.4 ^b	7.7-19.5 ^c	6.8-20.5 ^d	—
SK119A	6.5-17.1 ^a	2.9-16.6	1.1-14.9	2.2-14.8	—
SFK119WT	—	—	—	—	0.7-13.8
SK100B1	—	—	5.4-11.5 ^a	4.1-13.1	—
SFK4WT	—	—	—	—	3.8-12.1 ^a
SK100B	—	—	6.0-16.5 ^c	4.0-17.0	2.5-15.0
SFK2WT	—	—	—	—	5.9-16.1 ^a
SK100A	6.5-18.4 ^a	6.0-19.1	4.4-17.8	5.1-18.2	—
SFK1WT	—	—	—	—	7.3-16.1 ^a

Notes:

a. Data available for August only.

b. Data available for June and July only.

c. Data available for July and August only.

d. Data available for June only.

°C = degrees Celsius

— = Not Available

Source: EBD Appendix 15.1E *Open River Water Temperature Model*.

TABLE 15.1-22
Area and Frequency of Off-channel Waterbodies by
Habitat Type in the South Fork Koktuli Watershed

Off-channel Waterbody	Area (acres)	Frequency (percent)
Beaver Complexes	42.0	91
Isolated Ponds	1.4	3
Side Channels	0.9	2
Beaver Pond Outlet Channels	0.9	2
Alcoves	0.9	2
Percolation Channels	0.0	0
Totals	46.1	100

Source: EBD Appendix 15.1D *Off-Channel Habitat*.

TABLE 15.1-23
Hydrologic Connectivity of Off-channel Waterbodies by
Habitat Type in the South Fork Koktuli Watershed

Off-channel Waterbody	Mainstem River Connection Discharge (cfs)
Side Channels	5 – 435
Beaver Complexes	152 – 372

cfs = cubic feet per second

Source: EBD Appendix 15.1D *Off-Channel Habitat*.

TABLE 15.1-31

Non-salmonid Fishes Found by Reach in the South Fork Koktuli Watershed,
2004-2008

Species/Life Stage	SFK-A	SFK-B	SFK-C	SFK-D	SFK-E
Burbot					
Juvenile		X	X		
Northern pike					
Adult			X	X	X
Juvenile		X	X	X	X
Sculpin sp.					
Adult	X	X	X	X	X
Juvenile	X	X	X	X	X
Ninespine stickleback					
Adult	X	X	X		X
Juvenile	X	X	X		X
Threespine stickleback					
Adult		X			
Juvenile	X	X			X
Stickleback sp.					
Adult					X
Juv/Adult	X	X	X		X
Juvenile		X	X		X
Lamprey sp.					
Juvenile	X	X			

SFK = South Fork Koktuli River

Source: EBD Appendix 15.1B *Reach Analysis*.

TABLE 15.1-32

Designated Stream Reaches in the Upper Talarik Watershed

Reach Name	Location (RK)	Description
UT-A	0.0 – 5.9	Unconfined, low gradient reach upstream of the confluence with Iliamna Lake
UT-B	5.9 – 16.8	Unconfined, low gradient reach upstream of the confluence with First Creek (UT 1.60)
UT-C	16.8 – 24.8	Relatively confined reach downstream of Tributary UT 1.190
UT-D	24.8 – 36.3	Relatively confined reach downstream of mapped landslide
UT-E	36.3 – 45.1	Upstream of landslide and downstream of Tributary UT 1.350
UT-F	45.1 – 59.1	Reach immediately downstream of canyon
UT-G	59.1 – 62.4	Headwater canyon reach

RK = River Kilometer

UT = Upper Talarik Creek

Source: EBD Appendix 15.1F *Fluvial Geomorphology Studies*.

TABLE 15.1-33

Range of Summer (June, July, and August) Water Temperatures in the Upper Talarik Watershed

Station	Water Temperatures (°C)				
	2004	2005	2006	2007	2008
UT100E	3.6-9.1 ^a	3.3-10.3	2.5-9.7	2.5-9.7	—
UT100D	7.8-18.8 ^a	4.5-18.5	2.7-16.8	4.3-17.0	—
UT135A	—	—	—	4.8-17.5	—
UT135AWT	—	—	—	—	8.6-17.1 ^a
UT135BWT	—	—	—	—	8.6-17.6 ^a
UT100C2	—	—	—	3.7-16.2	—
UT100C1	—	—	—	4.8-17.3	—
UT5WT	—	—	—	—	6.9-14.5 ^a
UT100C	—	—	—	4.7-16.6	—
UT119A	3.9-8.4 ^a	3.7-9.3	2.9-9.0	3.2-8.3	—
UT119WT	—	—	—	—	3.4-8.9
UT100B	—	5.8-15.5	6.0-15.0 ^b	4.5-14.5	4.0-13.0
UT4WT	—	—	—	—	5.7-11.5 ^a
UT3WT	—	—	—	—	4.8-15.4
UT2WT	—	—	—	—	7.3-14.9 ^a

Notes:

a. Data available for August only.

b. Data available for June and July only.

°C = degrees Celsius

— = Not Available

Source: EBD Appendix 15.1E *Open River Water Temperature Model*.